

REMARKS/ARGUMENTS

The Office is requiring restriction in the above-identified case as follows:

Group 1, Claim(s) 3-5, 12-18, 19 and 25, drawn to a first method drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence DSPLVPFIDFHP and a first product drawn to a medicament and a pharmaceutical composition comprising a peptide DSPLVPFIDFHP.

Group 2, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence LWQPPLIPGIDF.

Group 3, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence QIEPWFTPEDFP.

Group 4, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence TRLAPLVFPLDY.

Group 5, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence SWLQMPWALVRT.

Group 6, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence EIHLRMIKQITI.

Group 7, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence WHLEYMWWRWPRL.

Group 8, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence LIEQRLPKHILT.

Group 9, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence YETSSSRLLAYA.

Group 10, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence TLASQLSNTSAY.

Group 11, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence SDQGVNGSWSNP.

Group 12, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence WHNWNLWAPASPT.

Group 13, Claim(s) 8, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence WHWQWTPWSIQP.

Group 14, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence IKSPLTWLVPPD.

Group 15, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence SHLDLSTGHRTS.

Group 16, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CYPLNPEVYHCG.

Group 17, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CWPLSHSVIVCG.

Group 18, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CSSVTAWTTGCG.

Group 19, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CYMASGVFLCG.

Group 20, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CWPLGPSTYICG.

Group 21, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CSLIASMETGCG.

Group 22, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CSKIASMETGCG.

Group 23, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CYIGDPPFNPCG.

Group 24, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence CWPLGDSTVICG.

Group 25, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a linear peptide comprises an amino acid sequence TRLAPLVFPLDY.

Group 30, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence SWLQMPWALVRT.

Group 31, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence EIHLRMIKQITI.

Group 33, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence WHLEYMWWRWPRL.

Group 34, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence LIEQRLPKHILT.

Group 35, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence YETSSSRLLAYA.

Group 36, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence TLASQLSNTSAY.

Group 37, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence SDQGVNGSWSNP.

Group 38, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence WHNWNLWAPASPT.

Group 39, Claim(s) 7, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence WHWQWTPWSIQP.

Group 40, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence IKSPLTWLVPPD.

Group 41, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence SHLDLSTGHRTS.

Group 42, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CYPLNPEVYHCG.

Group 43, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CWPLSHSVIVCG.

Group 44, Claim(s) 3-4 and 6, drawn to a method for preparation of a medicament wherein a cyclic peptide in having a sequence CSSVTAWTTGCG is attached covalently to side chain of a cysteine at position 11 of CSSVTAWTTGCG.

Group 45, Claim(s) 3-4 and 6, drawn to a method for preparation of a medicament wherein a cyclic peptide in having a sequence CSSVTAWTTGCG is attached covalently to side chain of a cysteine at position 11 of CSKIASMETGCG.

Group 46, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CYMASGVFLCG.

Group 47, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CWPLGPSTYICG.

Group 48, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CSLIASMETGCG.

Group 49, Claim(s) 3-4 and 6, drawn to a method for preparation of a medicament wherein a cyclic peptide in having a sequence CSKIASMETGCG is attached covalently to side chain of a cysteine at position 11 of CSKIASMETGCG.

Group 50, Claim(s) 3-4 and 6, drawn to a method for preparation of a medicament wherein a cyclic peptide in having a sequence CSKIASMETGCG is attached covalently to side chain of a cysteine at position 11 of CSSVTAWTTGCG.

Group 51, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CYIGDPPFNPCG.

Group 52, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CWPLGDSTVICG.

Group 53, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CPLRLAFTFGCG.

Group 54, Claim(s) 3-4, drawn to a method for preparation of a medicament wherein a cyclic peptide comprises an amino acid sequence CTRMSHGYWICG.

Group 55, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence LWQPPLIPGIDF.

Group 56, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence QIEPWFTPEDFP.

Group 57, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence TRLAPLVFPLDY.

Group 58, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence SWLQMPWALVRT.

Group 59, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence EIHLRMIKQITI.

Group 60, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence WHLEYMWRWPRL.

Group 61, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence LIEQRLPKHILT.

Group 62, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence YETSSSRLLAYA.

Group 63, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence TLASQLSNTSAY.

Group 64, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence SDQGVNGSWSNP.

Group 65, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence WHNWNLWAPASPT.

Group 66, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence IKSPLTWLVPPD.

Group 67, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence SHLDSTGHRTS.

Group 68, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CYPLNPEVYHCG.

Group 69, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CWPLSHSVIVCG.

Group 70, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CSSVTAWTTGCG.

Group 71, Claim(s) 12-17, 20 and 24-25, drawn to a medicament. and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CYMASGVFLCG.

Group 72, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CWPLGSTYICG.

Group 73, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CSLIASMETGCG.

Group 74, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CSKIASMETGCG.

Group 75, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CYIGDPPFNPCG.

Group 76, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CWPLGDSTVICG.

Group 77, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CPLRLAFTFGCG.

Group 78, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a linear peptide comprising an amino acid sequence CTRMSHGYWICG.

Group 79, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence DSPLVPFIDFHP.

Group 80, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence LWQPPLIPGIDF.

Group 81, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence QIEPWFTPEDFP.

Group 82, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence TRLAPLVFPLDY.

Group 83, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence SWLQMPWALVRT.

Group 84, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence EIHLRMIKQITI.

Group 85, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence WHLEYMWRWPRL.

Group 86, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence LIEQRLPKHILT.

Group 87, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence YETSSSRLLAYA.

Group 88, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence TLASQLSNTSAY.

Group 89, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence SDQGVNGSWSNP.

Group 90, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence WHNWNLWAPASPT.

Group 91, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence IKSPLTWLVPPD.

Group 92, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence SHLDSTGHRTS.

Group 93, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CYPLNPEVYHCG.

Group 94, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CWPLSHSVIVCG.

Group 95, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CSSVTAWTTGCG.

Group 96, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CYMASGVFLCG.

Group 97, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CWPLGSTYICG.

Group 98, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CSLIASMETGCG.

Group 99, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CSKIASMETGCG.

Group 100, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CYIGDPPFNPCG.

Group 101, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CWPLGDSTVICG.

Group 102, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CPLRLAFTFGCG.

Group 103, Claim(s) 12-17, 20 and 24-25, drawn to a medicament and a pharmaceutical composition comprising a cyclic peptide comprising an amino acid sequence CTRMSHGYWICG.

Group 104, Claim(s) 21 and 26, drawn to a polynucleotide wherein the polynucleotide encodes the peptide.

Group 105, Claim(s) 22-23 and 27-28, drawn to a recombinant vector and a host cell.

Applicants have elected, with traverse, Group 95: Claim(s) 12-17, 20 and 24-25, for further prosecution.

Applicants traverse the restriction requirement on the grounds that Groups 1 to 105 have unity of invention and therefore, are improperly restricted. The peptides in these groups have, for example, both structural and functional features:

A functional feature: for example, a B epitope of a PSA (a poly- α 2,8 sialic acid) attached to a neural cell adhesion molecule (NCAM) that is recognized by an anti-PSA antibody;

A functional feature: for example, the ability to modulate NCAM functions;

A structure feature: for example, a peptide conformation representing the B epitope of a PSA attached to NCAM.

The method as claimed in Claims 1-11, the medicament as claimed in Claims 12 and 24, the pharmaceutical composition of Claims 13 and 25, and the peptides and products in Claims 14-28, concern peptides which have the combination of structural and functional features exemplified above.

These features are important because peptides that mimic the structure of PSA epitopes fall into three categories, based on their reactivity with anti-PSA antibodies:

- 1) mimotopes specific to bacterial PSA,
- 2) mimotopes specific to vertebrate PSA, and
- 3) mimotopes specific to both PSA.

Historically, the only PSA mimotopes having therapeutic applications are mimotopes specific to bacterial PSA; these peptides are used for vaccination against type B meningococcus. These peptides have specific bacterial activity but no cross-reactivity with PSA attached to NCAM, that is present, for example, to avoid potential neurological damage, neuronal cells of human vaccinated subjects.

PSA attached to NCAM mimotopes, where the PSA exemplify the above features, are for example, able to modulate NCAM functions. Since NCAM is involved in vertebrate cell regeneration and plasticity, modulation of NCAM functions by these mimotopes results in, for example, an activation or inhibition of the growth, the plasticity and the migrant of neurons *in vitro*. *In vivo*, activation leads to, for example, functional recovery from spinal

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cord injury. Thus, the PSA attached to NCAM mimotopes has a broad range of therapeutic applications.

Accordingly, unity of invention exists. Withdrawal of the Restriction Requirement is requested.

Further, unity of invention restrictions are not justified for the dependent claims because unity of invention applies only in relation to independent claims and not to dependent claims. See Part 1(c), page 59 of Annex B of the Administrative Instructions of under the PCT.

Thus, Groups containing only dependent claims (for example, Group 51), cannot be properly restricted based on lack of unity of invention. Withdrawal of the Restriction Requirement for Groups containing only dependent claims is requested.

Finally, dependent Claims 3 and 16 are Markush claims that define alternatives that fulfill the requirement for a technical interrelationship by having corresponding special technical features of modulating NCAM and being PSA mimotopes.

Withdrawal of the Restriction requirement for Markush group members within Claims 3 and 16 is requested.

Finally, should the elected group be found allowable, Applicants request rejoinder of all claims that depend from or include all of the limitations of the allowed claims.

Applicants submit the present application is now in condition for examination on the merits. Early notification to this effect is earnestly solicited.

Respectfully submitted,

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